CLAIMS

What is claimed is:

1. A database structure, embodied on at least one computer accessible medium, for managing information on regulated entities, said database structure comprising:

a primary data level identifying regulated entities, optionally associable with a geographic location; and

a secondary data level identifying subject items of the regulated entities identified at said primary level, where the subject items include objects and activities subject to regulatory requirements.

2. A database structure as recited in claim 1, wherein said database structure further comprises at least one lower data level, below said secondary data level, to store detail information on imposition of regulatory requirements on the subject items via issuance of permits, monitoring operation of the subject items of the regulated entities to verify compliance with the regulatory requirements and issuance of enforcement orders to compel compliance with the regulated entities.

3. A database structure as recited in claim 2, wherein the information managed by using said database structure is accessed by an environmental regulatroy agency, and

wherein the subject items identified by the information in said secondary data
5   level relate to different environmental program areas regulating a single regulated entity and data
stored according to said database structures are accessible by all of the environmental program
areas over which the environmental regulatory agency has jurisdiction.

4. A database structure as recited in claim 1, wherein the information in said primary
data level identifies the regulated entities as one of

a fixed operation having a single geographic location associated therewith;

an occurrence having a single geographic location associated therewith;

a mobile operation that changes geographic location periodically; and

an organization responsible for transport of potentially hazardous materials, either
in vehicles or conduits, across a geographic area.

5. A database structure as recited in claim 1, wherein said database structure defines
locations to store data related to work activity schedules, assignments and progress to date in a
joint-usage database.

6. A database structure as recited in claim 1, wherein the information managed by using
said database structure is accessed by a regulatory agency, and defines permits for operations of
the regulated entities, criteria for determining compliance with the permits and actions taken to
enforce the permits, for all program areas over which the regulatory agency has jurisdiction.

7. A database structure as recited in claim 1, wherein each record at said secondary level
contains one of a single subject item and a list of subject item identifiers for related subject items.

8. A database structure as recited in claim 7,

wherein the information managed using said database structure is accessed by an
environmental regulatory agency, and

wherein at least one list of the subject item identifiers in a record in said secondary data level identifies different environmental program areas regulating a single regulated entity.

9. A database structure as recited in claim 1,

wherein the information managed by using said database structure is accessed by a regulatory agency, and

wherein said database structure defines for at least some of the subject items a set of characteristics that determine the regulatory requirements typically applicable thereto under all program areas for which the regulatory agency is responsible.

10. A database structure as recited in claim 9, wherein said database structure further comprises a requirements library specifying the regulatory requirements typically applicable to the subject items having a given set of characteristics, providing inspection checklist language corresponding to the requirements in fewer words, providing default descriptions of noncompliance for use when requirements are violated, and providing default corrective action requirements for use in enforcement orders addressing violations of requirements.

11. A database structure as recited in claim 9, wherein said database structure defines locations to store data in a joint-usage database describing violations of the regulatory requirements applicable to at least one regulated subject item.

12. A database structure as recited in claim 11, wherein said database structure defines locations to store data in the joint-usage database describing enforcement orders for the at least one regulated subject item.

13. A database structure as recited in claim 1, further comprising a master regulatory profile of identification and descriptive data associated with each regulated entity identified at said primary level, not in data records associated only with permits.

14. A database structure as recited in claim 1, wherein said database structure defines locations to store data in a joint-usage database describing field inspections and results of the field inspections.

15. A database structure as recited in claim 1,

wherein the information managed by using said database structure is accessed by an environmental regulatory agency, and

wherein said database structure defines locations to store data describing pollutant releases in a joint-usage database.

16. A database structure as recited in claim 1, wherein said database structure defines locations to store data describing field inspections and results of the field inspections in a joint-usage database.

17. A method of managing information on regulated entities, comprising:

creating a joint-usage database with a primary data level identifying the regulated entities, optionally associable with a geographic location, and a secondary data level identifying subject items of the regulated entities;

adding permit data to the joint-usage database, by referencing at least one of the subject items for one of the regulated entities for generating a permit for the at least one of the subject items;

adding operational performance data to the joint-usage database with reference to the at least one of the subject items for the one of the regulated entities, the operational performance data obtained from monitoring reports of operation of the at least one of the subject items; and

accessing the joint-usage database when necessary to enforce the permit.

18. A method as recited in claim 17,

wherein the information is maintained by a regulatory agency having jurisdiction over a plurality of program areas, and

wherein said creating of the joint-usage database creates unique records for the regulated entities in the joint-usage database as unique for all of the program areas over which the regulatory agency has jurisdiction.

19. A method as recited in claim 17,

wherein the information is maintained by an environmental regulatory agency, and

wherein said creating of the joint-usage database creates for a single regulated entity multiple subject items identifying different environmental program areas regulating the single regulated entity.

20. A method as recited in claim 18, wherein the information in said primary data level identifies the regulated entities as one of

a fixed operation having a single geographic location associated therewith;

an occurrence having a single geographic location associated therewith;

a mobile operation that changes geographic location periodically; and

an organization responsible for transport of potentially hazardous materials, either in vehicles or conduits, across a geographic area.

21. A method as recited in claim 18, wherein said creating of the joint-usage database includes storing in each record at the secondary level one of a single subject item and a list of subject item identifiers for related subject items.

22. A method as recited in claim 21, wherein said creating of the list of subject item identifiers is performed at discretion of a user for any subject items regardless of the environmental program areas associated with the subject items identified by the subject item identifiers.

23. A method as recited in claim 18,

further comprising creating program-specific tables, separately identifiable from and supplementing joint-usage data in the joint-usage database,

wherein said creating of the joint-usage database creates unique records for the regulated entities regulated by the environmental regulatory agency, including records in all of the program-specific tables, and

wherein said adding of the permit data and the operational data adds data to any of the program-specific tables only when the data is of a type not accommodated by the joint-usage database.

24. A method as recited in claim 17,

wherein said creating of the database includes defining in the subject items, characteristics applicable to requirements for regulating the regulated entities, and

wherein said method further comprises creating in the joint-usage database, separate from tables containing the information identifying the regulated entities and the subject items, a requirements library specifying the requirements for regulating the regulated entities, providing inspection checklist language corresponding to the requirements in fewer words, providing default descriptions of noncompliance for use when requirements are violated, and providing default corrective action requirements for use in enforcement orders addressing violations of requirements.

25. A method as recited in claim 17,

wherein said adding permit data includes setting requirement data for the permit, and

wherein said method further comprises preparing enforcement orders based on violations detected by comparing the operation performance data with the requirement data based on selection by a user for each enforcement order to include one of program-specific violations and multimedia violations of requirements from different regulatory programs.

26. A method for regulation of regulated entities, comprising:

maintaining information on the regulated entities, including a joint-usage database with the regulated entities at a primary data level and subject items of the regulated entities at a secondary data level;

5   generating a permit for at least one of the subject items of each of the regulated entities by accessing the joint-usage database;

obtaining operational data from monitoring operation of the subject items;

storing the operational data in the joint-usage database; and

enforcing each permit based on the information stored in the joint-usage database.

27. A method as recited in claim 26,

wherein said maintaining includes

defining for the subject items characteristics applicable to requirements for regulating the regulated entities, and

maintaining in the joint-usage database, a requirements library specifying requirements for regulating the regulated entities, and

wherein said generating includes

receiving a request from a user specifying the at least one subject item of a selected regulated entity to be covered by the permit, and

automatically accessing the requirements library in response to the request from the user to determine the requirements applicable to the permit based on the characteristics of the at least one subject item.

28. A method as recited in claim 27, wherein said maintaining includes storing in each record in the secondary data level one of a single subject item and a list of subject item identifiers selected by a user from the subject items related to one of the regulated entities without any limitation to the characteristics of the subject items.

29. A method as recited in claim 28,

wherein said maintaining of the requirements library includes maintaining checklist language corresponding to the requirements for operation of the subject items, and

wherein said method further comprises generating inspection checklists using the
5   checklist language stored in the requirements library.

30. A method as recited in claim 26,

wherein the regulated entities are subject to regulation under a plurality of program areas,

wherein said maintaining includes creating program-specific tables, separately
5   identifiable from and supplementing joint-usage data in the joint-usage database, for each of the programs requiring additional data not included in the joint-usage data and of a type used by only one of the program areas, and

wherein said generating of each permit is performed using joint-usage software accessing the joint-usage database supplemented, as needed, with information in the program-
10   specific tables.

31. A method as recited in claim 30, wherein said generating includes

receiving a request from a user specifying a selected regulated entity and a plurality of the subject items related thereto and corresponding to different program areas to be covered by the permit, and
5   automatically producing a single permit in response to the request from the user to regulate operation of the subject items under all of the different program areas.

32. A method as recited in claim 26, wherein said method is performed by an environmental regulatory agency,

wherein said obtaining includes obtaining the operational data on activities that have environmental impact, including pollutant releases, and
5   wherein said storing includes storing the operational data describing violations of applicable requirements, including pollutant releases, in the joint-usage database.

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33. A method of managing information, comprising:

storing data related to work activity schedules, assignments and progress to date in a joint-usage database;

updating the data stored in the joint-usage database; and

5   displaying the data stored in the joint-usage database to all personnel having security clearance, regardless of the assignments for which the personnel are responsible.

34. A method as recited in claim 33, wherein said method is performed by a computer program stored as a single executable program.

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35. A method as recited in claim 33,

wherein said storing stores in the joint-usage database at least one master record representing one subject item regulated in a plurality of program areas with detailed descriptions for each of the program areas, and

wherein said displaying displays the detailed descriptions for the one subject item on a single screen.

36. A method as recited in claim 33, wherein the data stored, updated and displayed includes data describing pollutant releases of a regulated entity.

37. A method as recited in claim 33, wherein the data stored, updated and displayed includes data describing violations of applicable requirements.

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38. A method as recited in claim 33,

wherein the data stored, updated and displayed includes data describing enforcement orders, and

wherein said method further comprises preparing multimedia enforcement orders

5   for violations of requirements from different program areas and program-specific enforcement

orders.

39.   A method of managing information on regulated entities, comprising:

maintaining a joint-usage database with a primary data level identifying the

regulated entities, a secondary data level identifying subject items of the regulated entities and

typical permit requirements for each of the subject items, the permit requirements for all subject

5   items including permit requirements in a plurality of program areas;

displaying the typical permit requirements for all of the subject items of a selected

regulated entity;

selecting permit data from among the typical permit requirements in response to

user input received after said displaying;

10   generating a permit based on the permit data selected, whereby said method can

generate any one of a multimedia permit, a program-specific permit and a custom permit

excluding specified subject items.

40.   A method of managing information on regulated entities, comprising:

maintaining a joint-usage database with a primary data level identifying the

regulated entities, a secondary data level identifying subject items of the regulated entities and

checklist language for typical permit requirements for each of the subject items, the checklist

5   language for all subject items including checklist language for the typical permit requirements in

a plurality of program areas;

displaying the checklist language for all of the subject items of a selected

regulated entity;

selecting from among the checklist language in response to user input received

10   after said displaying;

generating an inspection checklist based on said selecting of the checklist

language, whereby the inspection checklist generated by said method can exclude the checklist

language for any of the subject items, including limiting the inspection checklist to a single program area.

41. A system for regulation of regulated entities, comprising:

a memory unit to store information on the regulated entities, including a joint-usage database storing regulated entity identifiers at a primary data level, subject items of the regulated entities at a secondary data level and operational data of the subject items at a lower

5 level below the secondary level;

a processor, coupled to said memory unit, to generate a permit for at least one of the subject items of each of the regulated entities by accessing the joint-usage database in said memory unit;

an input unit, coupled to said processor and said memory unit, to input the

10 operational data obtained from monitoring operation of the subject items; and

an output unit, coupled to said processor, to output the permit.

42. At least one computer program, embodied on at least one computer accessible medium, for managing information on regulated entities, comprising:

at least one database access module to access a joint-usage database storing data in a primary data level identifying regulated entities and a secondary data level identifying

5 subject items of the regulated entities identified at the primary level, where the subject items include objects and activities subject to regulatory requirements;

at least one user interface module to input and display the data stored in the joint usage database;

at least one processing module to generate standard outputs based on the data

10 stored in the joint-usage database in response to control input received from users via said at least one user interface.